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12/10/2003

Jun Yong Shin

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EXAMINER

KHAN, USMAN A

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/731,025	Applicant(s) SHIN, JUN YONG	
	Examiner USMAN KHAN	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 12/10/2003, 10/05/2006, and 02/28/2007 have been considered by the examiner. The submissions are in compliance with the provisions of 37 CFR 1.97.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objection

Claim 33 is objected to because of the following informalities: in the claim the word "converted" should be changed to --converting--. Appropriate correction is required.

Claim 34 is objected to because of the following informalities: in the claim the last instance on the last line of the claim of "object" should be changed to --objects--. Appropriate correction is required.

Election/Restrictions

The requirement for restriction with mailing date of 02/20/2008 has been withdrawn in response to applicant arguments. Hence all of the claims 1 - 38 are pending and will be examined by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 - 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sotoda et al. (US patent No. 5,835,641) in view of Felder (US patent No. 4,544,064).

Regarding **claim 1**, Sotoda et al. teaches a zoom method (column 7 lines 17 *et seq.*; zoom control means) comprising: an extracting a color average value and a deviation of a photographic object within the photographic screen (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; range of colors and area recognition); and setting a zoom ratio according to a calculated size of the photographic object (figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; also column 7 lines 17 *et seq.*; size).

However, Sotoda et al. fails to disclose searching a center search line of a photographic screen. Felder, on the other hand teaches searching a center search line of a photographic screen.

More specifically, Felder teaches searching a center search line of a photographic screen (figure 6; also column 3 line 64 - column 5 line 2; center search line).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Felder with the teachings of Sotoda et al. to improve the location and position detection of an object as taught in column 1 lines 62 - 68 of Felder.

Regarding **claim 2**, as mentioned above in the discussion of claim 1, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Felder teaches that the upper and lower lines are searched (figure 6 items 42 – 44 and 42' - 44'), when combined with Sotoda et al. the result will be extracting the color average value and the deviation (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; range of colors and area recognition of Sotoda et al.).

Regarding **claim 3**, as mentioned above in the discussion of claim 1, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches calculating the size of the photographic object based on the average value and the deviation (figures 11 and 16 and column 12 lines 49 *et seq.* and

column 15 liens 6 *et seq.*; range of colors and area recognition; also column 7 lines 17 *et seq.*; size).

Regarding **claim 4**, as mentioned above in the discussion of claim 3, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches wherein calculating the size of the photographic object comprises: analogizing a size of a photographic object by calculating the average value and the deviation (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; range of colors and area recognition; also column 7 lines 17 *et seq.*; size); and judging whether the photographic object is a normal region corresponding to a photographic mode (figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; this region can be considered a normal region; also column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; means for recognizing an object (a human face, for example)).

Regarding **claim 5**, as mentioned above in the discussion of claim 4, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches converting a digital camera into a user hand mode so that a user can perform a direct zoom processing when the photographic object is not a normal region (column 8 lines 43 – 56, column 14 lines 21 – 27, column 22 lines 15 - 23; user controlled).

Regarding **claim 6**, as mentioned above in the discussion of claim 1, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Felder teaches that searching the center search line comprises: setting a photographic mode (column 2 lines 34 *et seq.* camera searches for printed labels 35 with coding 36 with language); preprocessing the photographic screen (column 4 lines 17 *et seq.*; field to be scanned is subdivided); and performing a line scanning at a region of the center search line (figure 6 items 41, 42 – 44, and 42' - 44').

Regarding **claim 7**, as mentioned above in the discussion of claim 6, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches preprocessing the photographic screen comprises performing one of a smoothing method and a blurring method for minimizing error generation (figure 10 item 25).

Regarding **claim 8**, as mentioned above in the discussion of claim 1, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Felder teaches the center search line comprises a horizontal axis including an approximate center of the photographic screen and a reference for starting an initial line scanning (figure 6 items 41, 42 – 44, and 42' - 44').

Regarding **claim 9**, as mentioned above in the discussion of claim 1, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally,

Felder teaches that extracting the color average value and a deviation of the photographic object comprises: detecting the photographic object by searching the center search line (figure 6 items 41, 42 – 44, and 42' - 44'); searching a predetermined number of upper and lower search lines based on the center search line (figure 6 items 42 – 44 and 42' - 44'), when combined with Sotoda et al. the result will be extracting the color average value and the deviation of the photographic object (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; range of colors and area recognition of Sotoda et al.).

Regarding **claim 10**, as mentioned above in the discussion of claim 9, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Felder teaches that searching the predetermined number of upper and lower search lines comprises performing a line-scanning (figure 6 items 41, 42 – 44, and 42' - 44'), and searching lines set with a predetermined gap up and down one line by one line (figure 6 items 41, 42 – 44, and 42' - 44').

Regarding **claim 11**, as mentioned above in the discussion of claim 9, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. in combination with Felder teaches when the photographic object is not detected (column 8 lines 43 – 56, column 14 lines 21 – 27, column 22 lines 15 - 23; user controlled), the method further comprises: resetting the center search line (figure 6 items 41, 42 – 44, and 42' - 44' Felder when combined with Sotoda et al.'s user

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selecting different regions); resetting upper and lower search lines based on the reset center search line; and searching the predetermined number of upper and lower search lines based on the reset search line (figure 6 items 41, 42 – 44, and 42' - 44'), and searching lines set with a predetermined gap up and down one line by one line (figure 6 items 41, 42 – 44, and 42' - 44' Felder when combined with Sotoda et al.'s user selecting different regions).

Regarding **claim 12**, as mentioned above in the discussion of claim 1, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches setting the zoom ratio comprises calculating the zoom ratio by comparing the calculated size of the photographic object with a reference (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; range of colors and area recognition, figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 - 135; also column 7 lines 17 *et seq.*; size).

Regarding **claim 13**, as mentioned above in the discussion of claim 12, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches the reference value comprises one of a value manually preset by a user and a value preset based on a screen contrast (column 12 lines 22 *et seq.*; contrast).

Regarding **claim 14**, Sotoda et al. teaches a zoom method (column 7 lines 17 *et seq.*; zoom control means) comprising: extracting a color average value and a deviation of a photographic object on the photographic screen (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; range of colors and area recognition); judging a size of a photographic object based on the average value and the deviation (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; range of colors and area recognition; also column 7 lines 17 *et seq.*; size); and setting a zoom ratio based on a calculated size of the photographic object and a reference value (figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 - 135; also column 7 lines 17 *et seq.*; size); and applying the zoom ratio to the photographic object (figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 - 135).

However, Sotoda et al. fails to disclose searching a predetermined number of lines of a photographic screen. Felder, on the other hand teaches searching a predetermined number of lines of a photographic screen.

More specifically, Felder teaches searching a predetermined number of lines of a photographic screen (figure 6; also column 3 line 64 - column 5 line 2; center search line).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Felder with the teachings of Sotoda et al. to improve the location and position detection of an object as taught in column 1 lines 62 - 68 of Felder.

Regarding **claim 15**, as mentioned above in the discussion of claim 14, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Felder teaches setting a center search line of the photographic screen and performing a line scan (figure 6 items 41, 42 – 44, and 42' - 44').

Regarding **claim 16**, as mentioned above in the discussion of claim 14, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches preprocessing the photographic screen according to a set photographic mode (column 2 lines 34 *et seq.* camera searches for printed labels 35 with coding 36 with language).

Regarding **claim 17**, as mentioned above in the discussion of claim 16, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches that the photographic mode comprises one of a portrait mode and a text mode (figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; also column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; means for recognizing an object (a human face, for example)).

Regarding **claim 18**, as mentioned above in the discussion of claim 16, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches preprocessing the photographic screen comprises performing one

of a smoothing method and a blurring method for minimizing error generation (figure 10 item 25).

Regarding **claim 19**, as mentioned above in the discussion of claim 14, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Felder teaches the center search line comprises a horizontal axis including an approximate center of the photographic screen and a reference for performing a line scan in order to detect the photographic object (figure 6 items 41, 42 – 44, and 42' - 44').

Regarding **claim 20**, as mentioned above in the discussion of claim 14, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. in combination with Felder teaches when the photographic object is not detected (column 8 lines 43 – 56, column 14 lines 21 – 27, column 22 lines 15 - 23; user controlled), resetting the center search line and performing a line scan based on the reset center search line (figure 6 items 41, 42 – 44, and 42' - 44' Felder when combined with Sotoda et al.'s user selecting different regions).

Regarding **claim 21**, as mentioned above in the discussion of claim 14, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Felder teaches that searching the predetermined number of upper and lower search lines comprises performing a line-scanning (figure 6 items 41, 42 – 44, and 42' - 44'),

and searching lines set with a predetermined gap up and down one line by one line (figure 6 items 41, 42 – 44, and 42' - 44').

Regarding **claim 22**, as mentioned above in the discussion of claim 14, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches converting into a user hand mode so that a user can perform a direct zoom processing when the photographic object is not a normal region (column 8 lines 43 – 56, column 14 lines 21 – 27, column 22 lines 15 - 23; user controlled).

Regarding **claim 23**, as mentioned above in the discussion of claim 14, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches the reference value comprises one of a value preset manually by a user and a value preset based on a screen contrast (column 12 lines 22 *et seq.*; contrast).

Regarding **claim 24**, Sotoda et al. teaches a zoom method of a digital camera apparatus associated with a mobile communication terminal (column 7 lines 17 *et seq.*; zoom control means) the comprising: extract at least one of an average value and a deviation of a skin color of the photographic object (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; range of colors and area recognition also figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; this region can be considered a normal region; also

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column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; means for recognizing an object (a human face, for example)); calculating a size of a face region based on the extracted average value and the deviation of the skin color (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; range of colors and area recognition also figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; this region can be considered a normal region; also column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; means for recognizing an object (a human face, for example); also column 7 lines 17 *et seq.*; size).

However, Sotoda et al. fails to disclose searching a search line of a photographic screen to detect a photographic object and searching upper and lower search lines. Felder, on the other hand teaches searching a search line of a photographic screen to detect a photographic object and searching upper and lower search lines.

More specifically, Felder teaches searching a search line of a photographic screen to detect a photographic object and searching upper and lower search lines (figure 6 items 41, 42 – 44, and 42' - 44' also figure 6; also column 3 line 64 - column 5 line 2; center search line).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Felder with the teachings of Sotoda et al. to improve the location and position detection of an object as taught in column 1 lines 62 - 68 of Felder.

Regarding **claim 25**, as mentioned above in the discussion of claim 24, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches comparing the calculated size of the face region with a reference value; and calculating a zoom ratio based on the comparison (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; range of colors and area recognition also figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; this region can be considered a normal region; also column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; means for recognizing an object (a human face, for example); also column 7 lines 17 *et seq.*; size).

Regarding **claim 26**, as mentioned above in the discussion of claim 25, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches applying the calculated zoom ratio to the photographic screen (figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 - 135).

Regarding **claim 27**, as mentioned above in the discussion of claim 24, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Felder teaches the search line comprises a center search line positioned approximately at a center of the photographic screen (figure 6 items center line 41 with other lines 42 – 44, and 42' - 44').

Regarding **claim 28**, as mentioned above in the discussion of claim 24, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. in combination with Felder teaches resetting the center search line (figure 6 items 41, 42 – 44, and 42' - 44' Felder when combined with Sotoda et al.'s user selecting different regions) and searching lines set with a predetermined gap up and down one line by one line (figure 6 items 41, 42 – 44, and 42' - 44' Felder when combined with Sotoda et al.'s user selecting different regions).

Regarding **claim 29**, as mentioned above in the discussion of claim 24, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Felder teaches searching upper and lower search lines comprises alternatively searching lines set with a predetermined gap up and down one line by one line (figure 6 items 41, 42 – 44, and 42' - 44').

Regarding **claim 30**, as mentioned above in the discussion of claim 24, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches calculating the size of the face region comprises: calculating an area of the face region by obtaining a number of pixels that exist within a range of a certain deviation from an average value of a skin color (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; range of colors and area recognition; also column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; means for recognizing an object (a human face, for example); also column 7 lines 17 *et seq.*; size).

Regarding **claim 31**, as mentioned above in the discussion of claim 24, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. in combination with Felder teaches calculating the size of the face region comprises: analogizing a length of a longest search line as a face width by obtaining a length variation through search lines having a smaller gap than the upper and lower search lines (figure 6 items 41, 42 – 44, and 42' - 44' Felder when combined with Sotoda et al.'s figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; range of colors and area recognition; also column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; means for recognizing an object (a human face, for example); also column 7 lines 17 *et seq.*; size).

Regarding **claim 32**, as mentioned above in the discussion of claim 24, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches calculating the size of the face region comprises judging whether a calculated face region is a normal photographic object (figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; this region can be considered a normal region; also column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; means for recognizing an object (a human face, for example); also column 7 lines 17 *et seq.*; size).

Regarding **claim 33**, as mentioned above in the discussion of claim 32, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches converting the digital camera into a user hand mode so that a user can perform a direct zoom processing when the calculated face region is not a normal photographic object (column 8 lines 43 – 56, column 14 lines 21 – 27, column 22 lines 15 - 23; user controlled also figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; this region can be considered a normal region; also column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; means for recognizing an object (a human face, for example)).

Regarding **claim 34**, as mentioned above in the discussion of claim 24, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches when plural skin colors more than a certain length exist and skin colors of a same pattern are detected, the method further comprises:

judging that a plurality of photographic objects exist; extracting an average value and a deviation of a skin color for each photographic object judged to be a face; calculating an area of a face region by obtaining a number of pixels that exist within a range of a certain deviation from the average value of each skin color; and zooming a photographic screen with a preset zoom ratio based on the number and a face size of the photographic object (column 8 lines 43 – 56, column 14 lines 21 – 27, column 22 lines 15 - 23; user controlled also figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; this region can be

considered a normal region; also column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; means for recognizing objects (human face, for example); also column 7 lines 17 *et seq.*; size).

However, Sotoda et al. fails to disclose the detection is at the search line and at adjacent upper and lower search lines. Felder, on the other hand teaches the detection is at the search line and at adjacent upper and lower search lines.

More specifically, Felder teaches the detection is at the search line and at adjacent upper and lower search lines (figure 6 items 41, 42 – 44, and 42' - 44' also figure 6; also column 3 line 64 - column 5 line 2; center search line).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Felder with the teachings of Sotoda et al. to improve the location and position detection of an object as taught in column 1 lines 62 - 68 of Felder.

Regarding **claim 35**, Sotoda et al. teaches a digital camera zoom method for a mobile communication terminal (column 7 lines 17 *et seq.*; zoom control means) the comprising: detecting an average value of a stroke thickness of the text (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; range of colors and area recognition also figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; this region can be considered a normal region; also column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; means for recognizing an object (a human face, for example) but can be any thing in the region

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even text); and calculating a size of the text based on the detected average value of the stroke thickness of a text (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; range of colors and area recognition also figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; also column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; means for recognizing an object (a human face, for example) but can be any thing in the region even text; also column 7 lines 17 *et seq.*; size).

However, Sotoda et al. fails to disclose searching a center search line of a photographic screen in order to detecting text and searching upper and lower search lines. Felder, on the other hand teaches searching a center search line of a photographic screen in order to detecting text and searching upper and lower search lines.

More specifically, Felder teaches searching a center search line of a photographic screen in order to detecting text and searching upper and lower search lines (figure 6 items 41, 42 – 44, and 42' - 44' also figure 6; also column 3 line 64 - column 5 line 2; center search line).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Felder with the teachings of Sotoda et al. to improve the location and position detection of an object as taught in column 1 lines 62 - 68 of Felder.

Regarding **claim 36**, as mentioned above in the discussion of claim 35, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches zooming the photographic screen to a maximum degree and enlarging the text (figure 12c; also column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; means for recognizing an object (a human face, for example) but can be any thing in the region even text; also column 7 lines 17 *et seq.*; size).

Regarding **claim 37**, as mentioned above in the discussion of claim 35, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches comparing the calculated size of the text with a reference value and calculating a zoom ratio based on the comparison (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; range of colors and area recognition and applying the zoom ratio to the photographic object also figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; this region can be considered a normal region; also column 12 lines 49 *et seq.* and column 15 lines 6 *et seq.*; means for recognizing an object (a human face, for example); also column 7 lines 17 *et seq.*; size).

Regarding **claim 38**, as mentioned above in the discussion of claim 37, Sotoda et al. in view of Felder teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches applying the calculated zoom ratio to the photographic screen

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(figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 - 135).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Edanami (US patent No. 6,297,846) teaches searching for a face portion and enlarging that portion.

Koyanagi et al. (US patent No. 6,323,898) teaches searching for a object and putting search lines on that object.

Enomoto (US patent No. 7,324,246) teaches putting center search lines on an image.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usman Khan whose telephone number is (571) 270-1131. The examiner can normally be reached on Mon-Thru 6:45-4:15; Fri 6:45-3:15 or Alt. Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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